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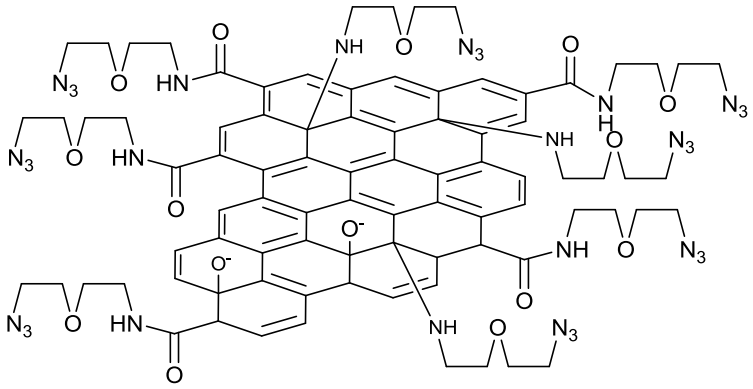
Reduced graphen oxide (RGO) is an interesting candidate for support material in chemical sensors [1]. RGO exhibits sufficient electric conductivity; high surface area and can be functionalized [2] by multifarious functional surface groups. This is attractive in selective introduction of enzymes or supramolecular host complexes for bio- and chemosensing, respectively [3-4]. Functionalization is mostly effedted at the graphene oxide (GO) step during processing of RGO, However, these systems can be unstable under normal reduction conditions. To address this issue several mild "green" reduction methods of GO can be used, but these methods lead to insufficient reduction of GO which in turn results in diminished conductivity [5].

In our work we have instead focused our attention on synthesis of azide functionalized RGO. This material offers highly reduced RGO with possibility of post-reduction functionalization through Copper(I)-catalyzed Azide-Alkyne Cycloaddition (CuAAC) "click-chemistry" tested on numerous complex and fragile systems [6].



Scheme. 1. Azido-RGO showing funcation Azide groups on both surface and edges of RGO-sheet.

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